



Amendments to the Claims

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

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1. (Currently Amended) A method for detecting an object ~~in~~ entering a monitored area, the method comprising the steps of:
illuminating the monitored area with a pattern;
capturing a live image of the monitored area, including the pattern; and
detecting an object entering ~~in~~ the monitored area when a change is detected in the pattern in the live image.

2. (Currently Amended) A method according to claim 1 wherein the detecting step detects an object entering ~~in~~ the monitored area when the change in the pattern exceeds a predetermined threshold.

3. (Original) A method according to claim 1 further comprising the steps of:
capturing a reference image of the monitored area, including the pattern; and
comparing the reference image and the live image to detect a change in the pattern in the live image.

4. (Original) A method according to claim 1 wherein the monitored area is illuminated with a static pattern.

5. (Original) A method according to claim 1 wherein the monitored area is illuminated with a dynamic pattern.

6. (Original) A method according to claim 3 wherein the reference image and the live image each have a number of mask windows, and wherein the comparing step

compares selected mask windows of the reference image to selected mask windows of the live image.

7. (Original) A method according to claim 6 wherein the comparing step compares the selected mask windows of the reference image and the live image using one or more comparing algorithms.

8. (Original) A method according to claim 7 wherein the comparing step compares two or more of the selected mask windows using different comparing algorithms.

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9. (Currently Amended) A method according to claim 6 further comprising the step of performing a predefined action if the detecting step detects an object ~~in~~ entering one of the selected mask windows.

10. (Original) A method according to claim 9 wherein the predefined action is different depending on in which mask window an object is detected.

11. (Currently Amended) A method for detecting an object ~~in~~ entering a monitored area, the method comprising the steps of:

illuminating the monitored area with a first pattern;

creating moiré interference bands by imposing a second pattern shifted relative to the first pattern;

capturing a live image of the monitored area, including the moiré interference bands; and

detecting an object entering ~~in~~ the monitored area when a change is detected in the moiré interference bands in the live image.

12. (Currently Amended) A method according to claim 11 wherein the detecting step detects an object entering ~~in~~ the monitored area when the change in the moiré interference bands exceeds a predetermined threshold.

13. (Original) A method according to claim 11 further comprising the steps of:
capturing a reference image of the monitored area, including the moiré interference bands; and

comparing the reference image and the live image to detect a change in the moiré interference bands in the live image.

14. (Original) A method according to claim 13 wherein the comparing step includes subtracting at least part of the live image from at least part of the reference image or visa-versa.

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15. (Original) A method according to claim 11 wherein the moiré interference bands are created by illuminating the monitored area with the second pattern.

16. (Original) A method according to claim 11 wherein the moiré interference bands are created by providing a mask or grating having the second pattern between the monitored area and an image capture device.

17. (Original) A method according to claim 11 wherein the moiré interference bands are created by digitally imposing the second pattern on the live image.

18. (Original) A method according to claim 11, wherein the reference image of the monitored area and the live image of the monitored area are captured with a sensor.

19. (Original) A method according to claim 18, wherein the first pattern is illuminated using light from a specified spectral region and the sensor is attuned to the spectral region.

20. (Original) A method according to claim 19, wherein the specified spectral region is near infrared.

21. (Original) A method according to claim 11, wherein the first pattern is illuminated using light from a first illumination source, and the second pattern is imposed using a second illumination source.

22. (Currently Amended) A method ~~according to claim 11~~, for detecting an object entering a monitored area, the method comprising the steps of:

illuminating the monitored area with a first pattern;

creating moiré interference bands by imposing a second pattern that is different relative to the first pattern;

capturing a live image of the monitored area, including the moiré interference bands; and

detecting an object in the monitored area when a change is detected in the moiré interference bands in the live image, and wherein the method for comparing the interference bands of the reference image and the live image uses a Radon filter oriented perpendicular relative to the interference bands.

23. (Currently Amended) A method for detecting an object in a monitored area comprising:

illuminating the monitored area with a specified pattern having bright areas and dark areas, each with a brightness level;

capturing a plurality of reference image mask windows, each mask window covering at least part of the monitored area;

for each reference image mask window, calculating a difference “~~gref~~” between the brightness levels corresponding to the light areas in the mask window and the brightness levels corresponding to the dark areas in the mask window;

for each reference image mask window, capturing a corresponding live image mask window;

for each live image mask window, calculating a difference “~~glive~~” between the brightness levels corresponding to the light areas in the mask window and the brightness levels corresponding to the dark areas in the mask window; and

indicating that an object has been detected when, for any mask window, the

difference calculated ~~value~~ "g_{live}" for the live image is different from the corresponding difference calculated ~~value~~ "g_{ref}" for the reference image by at least a specified threshold value.

24. (Original) A method according to claim 23 wherein the illuminating step includes illuminating the monitored area with a first specified pattern and a second specified pattern to create one or more moiré interference bands.
